gMODIS TECHNICAL TEAM MEETING

July 11, 1996

The MODIS Technical Team Meeting was chaired by Robert Murphy. Present were Bill Barnes, David Herring, Wayne Esaias, and Yoram Kaufman.

1.0 SCHEDULE OF EVENTS

July 15	**Semi-Annual Reports due to Barbara Conboy**
July 17 - 18	Atmosphere Discipline Group Meeting in Chincoteague, VA
July 18	MCST Science Advisory Panel at GSFC
Aug. 16	Revised ATBDs due to the EOS Project Science Office
Oct. 8	MODIS Calibration Working Group at GSFC
Oct. 9 - 11	MODIS Science Team Meeting at GSFC

2.0 MINUTES OF THE MEETING

2.1 MODIS Protoflight Model Tests

Barnes reported that SBRSÕ testing of the Protoflight Model (PFM) has begun. The scan angle dependence testing is complete and the data look good for three of the four focal planes. Barnes stated that the shortwave infrared and midwave infrared focal plane assembly seem to have problems on bands 5, 6, and 7, but SBRS needs to gather more data. According to Barnes, SBRS suspects that there may be a problem with the Engineering Model (EM) electronics used in those tests.

Within the next two days, SBRS will begin polarization testing. Barnes noted that the polarization specification states that SBRS should measure polarization in sixteen of the twenty reflectance solar bands; i.e., bands 1 - 19, and 26. He explained that SBRS will measure sixteen bands and interpolate the polarization of the other bands. SBRS does not currently plan to measure the polarization of bands 2, 4, 5, and 6.

Barnes announced that according to early test results there is apparent premature saturation in bands 1 and 2. SBRS is still studying this problem. Murphy added that in band 1, Lmax is greater than Lcloud, and in band 2, Lmax equals Lcloud. He wondered if perhaps the wrong band (band 2) is set for high gain. Murphy requested Barnes to make a clear report on this problem within the next two weeks to the Technical Team.

Kaufman pointed out that he needs high precision for aerosol remote sensing over ocean in the 860-nm band (Band 2). He observed that the 860-nm band has much less reflectance over the ocean than the 660-nm band (Band 1).

Murphy asked where SBRS now stands in its current test schedule. Barnes replied that SBRS is now about 1 week behind its current schedule. Murphy asked if it is possible that SBRS may not complete the testing by December 1996. Barnes responded affirmatively.

Murphy reported that the PFM electronics are now expected earlier than previously thought. He noted that SBRS may get about 2.5 weeks of testing completed on the EM electronics before they switch over to the PFM electronics.

2.1.1 Detector Cross Talk

Murphy told the team that he had just learned of a new problem with electronic cross-talk which occurs during detector readout. The anticipated impact may be as large as the scattered light problem. Barnes elaborated that some test data with the PFM electronics is showing cross-talk at levels as high as 3 - 4 percent of LTypical for some channels. Groups of eight channels are read out together, and all may contribute to the crosstalk, raising the possibility of very large total cross-talk. (Information developed after this meeting reveals that there are no measurements of this crosstalkÑit is a model result.)

Murphy stated that he is very concerned about this problem, and does not believe that it has been properly described by either SBRS or GSFC. Further clarification is essential.

Murphy stated that he is very concerned by this problem and feels that it is not fully understood by SBRS or GSFC. The electronic and focal plane crosstalk problems are two big issues that Murphy feels need better characterization.

2.2 MOCEAN Reports

Esaias reminded the Team that the Ocean Group is meeting July 15 - 17 at GSFC. Also, the MCST Science Advisory Panel meeting will be July 18 at GSFC. Murphy asked if the calibration and testing schedule will be discussed during the MCST SAP. Esaias responded affirmatively. Murphy said he would like representatives from SDST, as well as from each of the science discipline groups, to attend that meeting.

Esaias reported that he and several others met with Robert Price, director, Mission to Planet Earth (Code 170), to discuss SIMBIOS and a tentative project structure for that effort. He said that manpower and travel funds are concerns facing SIMBIOS. He feels that there needs to be a clear understanding of MODIS Ocean Group member obligations, relative to their SIMBIOS project activities. He requested MurphyÕs input into that differentiation.

2.3 Atmosphere Group Reports

Kaufman reported that the Atmosphere Group will hold its first independent splinter meeting next week in Chincoteague, VA.

He reported that the TARFOX (Tropospheric Aerosol Radiative Forcing Observational Experiment) campaign is underway out of NASA Wallops Flight Facility. He noted that the ER-2 will be flying the MODIS Airborne Simulator to obtain MODIS-like data over the Atlantic Ocean.

2.4 Approach for Cross Calibrating EOS AM-1 and PM-1 Instruments

Murphy reported that Weber has suggested making the EOS AM-1 and PM-1 platforms cross the north or south pole within a few minutes of one another, in their respective orbits. In this way, the two platforms can cross calibrate their instruments by comparing data over the same regions. Murphy asked whether, in the TeamÕs opinion, anything is wrong with this calibration approach radiometrically. No fundamental problems were identified.

3.0 ACTION ITEMS

3.1 Action Items Carried Forward

1. *Herring:* Review the schedules for the MODLAND workshop in August and the ATBD reviews in November to ensure that there is adequate time to revise ATBDs after each event.
2. *Herring*: invite a representative from the VIRS Team to attend the next MODIS Science Team Meeting to present an overview of their instrument, explain their data processing chain, and discuss how they are gridding their data.
3. *Guenther:* Forward copies of the SBRS test schedule to the Science Team as soon as it is available.